

AKROLOY®

PA LGF 40 blue (7729)

PA66+PA6I/6T LGF40

AKROLOY® PA LGF 40 blue (7729) is a 40% long glass fibre reinforced, semi-aromatic polyamide blend with extraordinary high stiffness and strength even at high temperature and very high impact and notched impact strength at elevated and low temperature even in conditioned state. PA LGF 40 blue (7729) distinguish due to isotropic mechanical properties, low shrinkage, higher heat deflection temperature and very good fatigue performance. The material has very good surface properties and is protected against the growth of microorganisms such as bacteria and fungi.

Features

metal substitution

Properties

Modulus

14.200 MPa

Strength

220 MPa

Impact

60 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

14200 MPa

1 mm/min | conditioned

13000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

220 MPa

5 mm/min | conditioned

190 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

1,9 %

5 mm/min | conditioned

1,9 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

60 kJ/m²

23°C | conditioned

60 kJ/m²

-30°C | d.a.m.

60 kJ/m²

-30°C | conditioned

60 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

21 kJ/m²

23°C | conditioned

21 kJ/m²

-30°C | d.a.m.

21 kJ/m²

-30°C | conditioned

21 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	240 °C
Melting temperature ISO 11357-3	DSC, 10K/min	255 °C
Temperature index for 50% loss of tensile strength IEC 60216	5.000 h 20.000 h	150 °C 115 °C

Flammability

Flammability UL 94	UL 1,6 mm Wall thickness UL 3,2 mm Wall thickness	HB Class HB Class
HWI UL 746A	UL 1,6 mm Wall thickness UL 3,2 mm Wall thickness	0 PLC 0 PLC
HAI UL 746A	UL 1,6 mm Wall thickness 3,2 mm Wall thickness	0 PLC 0 PLC
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+

General Properties

Density ISO 1183	23°C	1,47 g/cm³
Humidity absorption ISO 1110	70°C, 62% r.H.	1,4 %
Molding shrinkage ISO 294-4	flow transverse	0,3 - 0,5 % 0,6 - 0,8 %

Electrical Properties

Surface resistivity IEC 62631-3-2	d.a.m. conditioned	10¹² Ω 10¹⁰ Ω
Comparative tracking index IEC 60112	Test liquid A	600 V

Comparative tracking index

ASTM D3638

UL

0 PLC

High voltage arc tracking rate (HVTR)

UL 746A

UL

1 PLC

High Volt, Low Current Arc Resistance

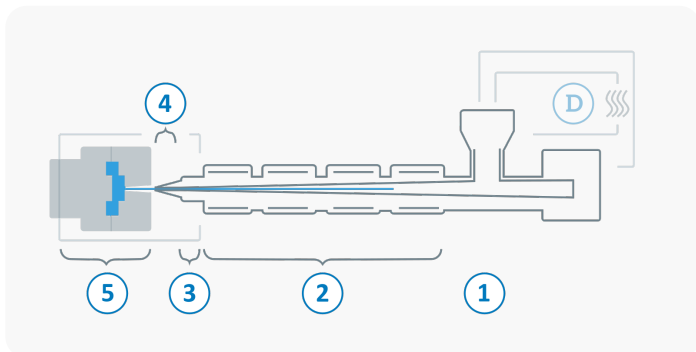
ASTM D495

UL

4 PLC

Processing

The values mentioned are recommendations. We only recommend desiccant / dry air dryers or vacuum dryers. Too long a drying time and the resulting residual moisture content below the lower limit can lead to filling problems and surface defects. The specified drying time refers to closed and undamaged bagged material. When processing from previously opened bags or from octabins with polyolefin inliners, a longer drying time may be necessary. It is recommended to check the residual moisture content after the drying process.



D	Drying time	0 - 4 h
	Drying temperature ($\tau \leq -30^{\circ}\text{C}$)	80 °C
	Processing moisture	0,02 - 0,1 %
1	Feed section	60 - 80 °C
2	Temperature Zone 1 - Zone 4	270 - 300 °C
3	Nozzle temperature	280 - 300 °C
4	Melt temperature	280 - 300 °C
5	Mold temperature	80 - 130 °C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	10 - 30 bar
	Injection speed	slow to medium
	Screw speed	5 - 15 m/min